

To clarify at the start: I do not believe nor I do believe in the Time travel. I approach every issue objectively and let the evidence lead me to the truth.

I am sceptical. Why? Because of the two things: 1) I am aware that my, human brain, is not evolved enough to sense the time dimension as we sense the physical dimensions. 2) There are certainly knowledges and technologies far beyond this time, or even reality, that we have no idea about yet.

Does Time exist as a continuous thread which can be pulled backwards or forth or is it comprised of a numerous event durations, which begin and end particularly each on its own, mutually interwoven like rope has many independent fibers serving the purpose together? To travel through the time we would then need to jump from one fiber which is ending to the another one which is just beginning or lasting.

Or there is no past and the future, only now, meaning that the Time is an illusion? Maybe there is no now. Now could be a transition point, infinitesimally thin line between past and future.

Hypothetically, if somehow the Time travel could be achieved most important question is the accompanied paradox.

People posed this paradox in a different forms but with the same problem: if you go back in time, visit the past and arrange that your parents never met and conceived you then you will, as a consequence, immediately cease to exist? You will promptly vanish into the obscurity like you never was?

I will try to solve it.

Time could be flexible branching as a tree.

You will continue to exist in your separate time branch.

You will never be conceived in the present.

Every time travel creates new stream.

The result are parallel words co-existing simultaneously in a different Time branches.

Throw a seed and it will grow a forest.

That is how I imagine the Time: as a tree. There is a main part, General Time, out of which numerous fragments divide and subdivide on their own but are always connected to the substance.

Everything is tied.

Let us move a step further in the Time travel paradox.

Someone else could come, maybe you from another reality, and stop the arrangement being done after it was done. Will that make you appear again like you never disappeared? In this present Time branch, third, yes. In the former, second, you are gone. In the first you exist.

Perhaps... You could be your father? Or your mother in case you are female. Or both if you change sex... Meaning that you are all three: you could be your father and your mother and their offspring. Imagine this triangle (triquetra): you are your parents and their child. You alone arranged your conception by traveling through the Time. You alone are the origin of yourself.

Is it really possible to create yourself, by using the Time travel phenomenon, out of nothing?

If so it is called the temporal knot.

I heard for the terms "triquetra" and "knot" in an excellent Netflix tv serie called the Dark.

Now imagine an ultimate time travel paradox: by using the high energy lasers, in the future, people have created the Big Bang - in the past. We ourselves, humans, could be the Origin of this Universe.

To answer the question is Time travel possible first we must know what the Time actually is. If it is.

My current, personal definition of the Time is that the Time is one of a direct consequences of an energy transformation but not the precursor, effect but not the cause. The other being physical and/or chemical change and the influence on the surroundings. There are General Time, event durations and the relative times. Yet, Time could be an illusion. Since the contemplation is ongoing, I am still open to every reasonable, logical solution.

Entire Universe could be a timekeeping device, a huge watch, considering the periodical resets, with every single atom being a smaller watch for itself.

In the singularity wavelength was 0, frequency infinite. With expansion of the Universe its wavelength increased while frequency decreased. The end of the

spacetime is where wavelength becomes straight line (infinite) and frequency 0. Hence, Time on a cosmic level is oscillation of matter and energy dissolution. Actually, there is no Time as we imagine it to be. There is only time flow measuring a radioactive decay of the particles.

Time is the frequency decrease on an universal scale of things. To travel through the Time we need to use high energies, like achieved with lasers and fusion, creating relativistic effect in isolated region, negative in order to travel in the past and positive, like the one around and inside black holes (anti-matter?), to travel in the future.

Humans invented the Time as an energy derivation.

Best movies and series, dealing with the Time traveling phenomenon, which I recommend are (with an explanation):

Movies - Interstellar (the black hole)

Series - Dark (different models of the Time travel machine fueled by an element Cesium converting into the dark matter under influence of a strong electric charges)

Now I intend to watch all movies found on the Youtube where respectable scientists and philosophers talk about Time.

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(to be continued in a week or two)

I am still watching the Time travel related Youtube videos but I have some interesting chain of thoughts I want to share with you. Maybe, maybe I discovered the secret of the Time travel.

Check this out:

Science say the Time and frequency are inversely proportional.

$$f = 1 / T$$

$$T = 1 / f$$

Are really the Time and frequency inversely proportional?

Or...

$$f = 1 / P_t$$

$$P_t = 1 / f$$

f = how many waves will pass a given point in a second

P_t = period of Time

For example, if waves of something pass 5 times through a given point in a second we say the frequency of that something is 5 Hz.

Using formula $T = 1 / f$ we get 0.2 sec result for the Time.

Therefore, period of Time is an inversely proportional to a frequency. Not Time itself. Time is sum of all related periods.

$$T = P_{t1} + P_{t2} \dots + P_{tn}$$

Max Planck formulated an equation relating energy (E) and frequency (f):

$$E = h \times f$$

h = Planck`s constant

f = frequency

Let us join the two equations and relate Time with energy.

$$E = h \times 1 / T ; \times T$$

$$E \times T = h ; / E$$

$$T = h / E$$

$$h = 6.62607015 \times 10^{-34} \text{ joule second.}$$

Time is derived from an energy.

Without an energy there is no Time.

By increasing the energy we lower the Time!

How do we increase an energy level? Well, the faster the object moves the greater kinetic energy it possess. At critical point the Time falls to zero (0) and starts "counting" backwards into the past.

$$E_k = 1/2 m \times v^2$$

Notice that the kinetic energy increases with the speed squared, meaning an

object with a double speed has four times bigger kinetic energy.

We can write this equation like this...

$$E_k = m/2 \times v^2$$

...meaning that the speed is 4 times bigger contributor than mass.

To travel into the past we invert the energy into its negative counterpart, anti-energy, either by modulating frequency or by using an anti-matter as a fuel source.

What is happening in the movie Interstellar? The spacecraft is accelerating which increases its kinetic energy and slows the flow of Time.

Time is a consequence of an energy transformation.

We use specific amount of energy to define one second (1 sec). We say that 0.000038 eV or 6.09×10^{-24} J is one second (1 sec).

$$\begin{aligned} E &= h \times f = 6.62607015 \times 10^{-34} \text{ kg m}^2 / \text{s} \times 9192631770 \text{ Hz} = 6 \times 10^{-24} \\ &\text{kg m}^2 / \text{s}^2 \text{ (Nm or J)} = 6 \times 10^{-24} \times 6.242 \times 10^{18} \text{ eV} = 37.5 \times 10^{-6} \text{ eV} = \\ &3.75 \times 10^{-5} \text{ eV} = 0.0000375 \text{ eV} = 6.09 \times 10^{-24} \text{ J} \end{aligned}$$

We just use another terminology for an energy - we call it Time.

In static version, we can encapsulate the subject intended for Time travel, shield it with an electromagnetic field and apply energy from lasers to create suitable environment for the journey into the past or the future.

Either way, high energy physics is the most promising solution for the Time

Travel.

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The true nature of Time (with Michio Kaku) BBC documentary episode 4/4:

<https://www.bbc.co.uk/programmes/b0074sbg>

Muons, products of cosmic rays and particles in atmosphere collisions, reach the Earth because they travel near the c which causes their inner clocks to slow down.

Time is relative, depending on the speed of the motion.

My question: or on the kinetic energy?

Augustine, philosopher, 4th century, "Confessions": Future does not yet exist, past no longer exist and presence takes no time at all. How can then Time exist?

Cygnus X-1

In 1971. astronomer Bolton decided to determine the mass of, what was thought to be, a neutron star Cygnus X-1 belonging to the binary system, where two cosmic objects rotate each other, some 8000 ly away from Earth.

The result was stunning.

Mass of the Cygnus X-1 was much above scientific predictions: approx. ten (10) solar masses. How could that be?

Well, it wasn't a neutron star. It was... The black hole. First discovered.

According to Einstein, very strong gravity slows down time same as moving at the very fast speed does. Movie Interstellar exploits this fact. The main character, near the black hole's event horizon, experiences the time flow much slower than the rest of us on Earth where gravity effect is significantly weaker.

At 27km long LHC in (under) Geneva scientists are colliding particles creating high energies which tear down spacetime. Then, theoretically, by using lasers they can stabilise the "wormhole" enabling the time travel.

Something else could be crucial then. It is called the negative energy and it was discovered by the Dutch physicist Casimir in 1948. This negative energy makes the "wormhole" grow larger. The observed effect of the negative energy is slowing down the time.

Hubble observed the Doppler effect in a distant galaxies. By measuring the redshift he discovered that some galaxies are moving away and some move closer to each other. Furthermore, Hubble discovered that the Universe is expanding.

Supernova (standard candles) research revealed that the Universe expansion is accelerating.

My thought: galaxies moving faster experience time flow slower. That means civilizations living far away can develop for millions of years while for us on Earth that duration corresponds to merely several years. What can we accomplish in just several years? Almost nothing.

Certain galaxies are moving faster than the speed of the Light. Time does not affect their inhabitants. They could even be traveling in the future constantly. This ancient beings, an Elders, could be just a few millions older than the Universe. If anyone they are the keepers of the Truth.
